

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ATTORNEY DOCKET NO. AUS919970560US2

In re Application of: §  
§  
**SCOTT LEONARD DAVIES, ET AL.** §  
§  
Serial No. **UNKNOWN** § Examiner: **UNKNOWN**  
§  
Filed: **OCTOBER 2, 1998** § Art Unit: **UNKNOWN**  
§  
For: **DATA PROCESSING SYSTEM AND** §  
**METHOD INCLUDED WITHIN AN** §  
**OSCILLOSCOPE FOR INDEPENDENTLY** §  
**TESTING AN INPUT SIGNAL** §

**PRELIMINARY AMENDMENT**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Please amend the above-identified application as follows:

**CERTIFICATE OF MAILING BY "EXPRESS MAIL" UNDER 37 CFR § 1.10**

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Jose Rodriguez

Typed name of person mailing paper or fee

Dori Boddyng

Signature of person mailing paper or fee

## **PENDING CLAIMS**

Claims 1-26 and 28 have been cancelled, Claims 27 and 29 have been amended and Claims 41-52 have been added as follows:

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26. (Deleted)

1        27. (Amended) A computer program product for permitting an oscilloscope to  
2 independently analyze a signal input into said oscilloscope, said oscilloscope including a plurality  
3 of triggering modes, said computer program product comprising:  
4              storage means;

5 instruction means embodied within said storage means for specifying a plurality of trigger  
6 parameters for each of said plurality of triggering modes; and

7 instruction means embodied within said storage means for thereafter, said oscilloscope  
8 automatically analyzing said input signal independently from any user input sequentially utilizing  
9 each of said plurality of triggering modes and said plurality of trigger parameters specified for each  
10 of said plurality of triggering modes[.], including:

11 instruction means embodied within said storage means for determining if said  
12 oscilloscope triggered on one of said plurality of undesired waveforms; and

13 instruction means embodied within said storage means responsive to a determination  
14 that said oscilloscope triggered on one of said plurality of undesired waveforms, for storing  
15 said one of said plurality of undesired waveforms.

28. (Deleted)

1 29. (Amended) The computer program product according to claim 2[8]7, further comprising  
3 instruction means embodied within said storage means for storing a plurality of trigger parameters  
4 associated with one of said plurality of triggering modes utilized when said oscilloscope triggered  
5 on said one of said plurality of undesired waveforms.

1 30. (Unchanged) The computer program product according to claim 29, wherein said  
2 instruction means for automatically analyzing further comprises:

3 instruction means embodied within said storage means for analyzing said input signal  
4 utilizing a first of said plurality of triggering modes and a first plurality of trigger parameters  
5 associated with said first of said plurality of triggering modes; and

6 instruction means embodied within said storage means for thereafter, automatically  
7 continuing said analyzing said input signal independently from any user input utilizing a second of  
8 said plurality of triggering modes and a second plurality of trigger parameters associated with said  
9 second of said plurality of triggering modes.

1 31. (Unchanged) The computer program product according to claim 30, further comprising:

2 instruction means embodied within said storage means for establishing said first plurality of  
3 parameters including a start voltage level, a stop voltage level, a voltage step, and a sweep rate; and  
4 instruction means embodied within said storage means for said oscilloscope attempting to  
5 trigger on any of said plurality of undesired waveforms utilizing said a current voltage equal to said  
6 start voltage level and utilizing said sweep rate.

1 32. (Unchanged) The computer program product according to claim 31, further comprising:  
2 instruction means embodied within said storage means for while said oscilloscope is  
3 attempting to trigger, determining an elapsed time;  
4 instruction means embodied within said storage means for determining if said elapsed time  
5 is greater than said sweep rate;  
6 instruction means embodied within said storage means responsive to said elapsed time being  
7 greater than said sweep rate, for incrementing said current voltage by said voltage step; and  
8 instruction means embodied within said storage means for said oscilloscope attempting to  
9 trigger on any of said plurality of undesired waveforms utilizing said current voltage and said sweep  
10 rate.

1 33. (Unchanged) The computer program product according to claim 32, further comprising  
2 instruction means embodied within said storage means responsive to said current voltage being equal  
3 to said stop voltage, for automatically continuing said analyzing said input signal utilizing said  
4 second of said plurality of triggering modes and said second plurality of trigger parameters  
5 associated with said second of said plurality of triggering modes.

1 34. (Unchanged) The computer program product according to claim 33, further comprising:  
2 instruction means embodied within said storage means for prioritizing said plurality of trigger  
3 modes; and  
4 instruction means embodied within said storage means for establishing a highest priority of  
5 said plurality of trigger modes as said first of said plurality of said triggering modes.

1           35. (Unchanged) The computer program product according to claim 34, further comprising  
2 instruction means embodied within said storage means for establishing a next highest priority of said  
3 plurality of trigger modes as said second of said plurality of said triggering modes.

1           36. (Unchanged) The computer program product according to claim 35, wherein said  
2 plurality of triggering modes includes an edge triggering mode.

1           37. (Unchanged) The computer program product according to claim 36, wherein said  
2 plurality of triggering modes includes a slew triggering mode.

1           38. (Unchanged) The computer program product according to claim 37, wherein said  
2 plurality of triggering modes includes a runt triggering mode.

1           39. (Unchanged) The computer program product according to claim 38, wherein said  
2 plurality of triggering modes includes a glitch triggering mode.

1           40. (Unchanged) The computer program product according to claim 39, wherein said  
2 storage means is a random access memory.

1           41. (Newly Added) An oscilloscope, comprising:  
2           a central processing unit;  
3           a memory coupled to said central processing unit;  
4           a plurality of triggering modes;  
5           means specifying a plurality of trigger parameters for each of said plurality of triggering  
6           modes; and

7           means for automatically analyzing an input signal independently from any user input  
8           sequentially utilizing each of said plurality of triggering modes and said plurality of trigger  
9           parameters specified for each of said plurality of triggering modes, including:

10           means for determining if said oscilloscope triggered on one of said plurality of  
11           undesired waveforms; and

12 responsive to a determination that said oscilloscope triggered on one of said plurality  
13 of undesired waveforms, means for storing said one of said plurality of undesired waveforms.

1 42. (Newly Added) The oscilloscope according to claim 41, further comprising means for  
2 storing a plurality of trigger parameters associated with one of said plurality of triggering modes  
3 utilized when said oscilloscope triggered on said one of said plurality of undesired waveforms.

1 43. (Newly Added) The oscilloscope according to claim 41, wherein said means for  
2 automatically analyzing further comprises:

3 means for analyzing said input signal utilizing a first of said plurality of triggering modes and  
4 a first plurality of trigger parameters associated with said first of said plurality of triggering modes;  
5 and

6 means for automatically continuing said analyzing said input signal independently from any  
7 user input utilizing a second of said plurality of triggering modes and a second plurality of trigger  
8 parameters associated with said second of said plurality of triggering modes.

1 44. (Newly Added) The oscilloscope according to claim 43, further comprising:

2 means for establishing said first plurality of parameters including a start voltage level, a stop  
3 voltage level, a voltage step, and a sweep rate; and

4 means for said oscilloscope attempting to trigger on any of said plurality of undesired  
5 waveforms utilizing a current voltage equal to said start voltage level and utilizing said sweep rate.

1 45. (Newly Added) The oscilloscope according to claim 42, further comprising:

2 means for determining, while said oscilloscope is attempting to trigger, an elapsed time;

3 means for determining if said elapsed time is greater than said sweep rate;

4 means responsive to said elapsed time being greater than said sweep rate, for incrementing  
5 said current voltage by said voltage step; and

6 means for said oscilloscope attempting to trigger on any of said plurality of undesired  
7 waveforms utilizing said current voltage and said sweep rate.

1           46. (Newly Added) The oscilloscope according to claim 45, further comprising means  
2 responsive to said current voltage being equal to said stop voltage, for automatically continuing said  
3 analyzing said input signal utilizing said second of said plurality of triggering modes and said second  
4 plurality of trigger parameters associated with said second of said plurality of triggering modes.

1           47. (Newly Added) The oscilloscope according to claim 46, further comprising:  
2           means for prioritizing said plurality of trigger modes; and  
3           means for establishing a highest priority of said plurality of trigger modes as said first of said  
4 plurality of said triggering modes.

1           48. (Newly Added) The oscilloscope according to claim 47, further comprising means for  
2 establishing a next highest priority of said plurality of trigger modes as said second of said plurality  
3 of said triggering modes.

1           49. (Newly Added) The oscilloscope according to claim 41, wherein said plurality of  
2 triggering modes includes an edge triggering mode.

1           50. (Newly Added) The oscilloscope according to claim 41, wherein said plurality of  
2 triggering modes includes a slew triggering mode.

1           51. (Newly Added) The oscilloscope according to claim 41, wherein said plurality of  
2 triggering modes includes a runt triggering mode.

1           52. (Newly Added) The oscilloscope according to claim 41, wherein said plurality of  
2 triggering modes includes a glitch triggering mode.

## REMARKS

Original Claims 1-26 and 28 have been cancelled, Claims 27 and 29 have been amended and Claims 41-52 have been added. In particular, the claim limitations previously recited in deleted Claim 28 has been incorporated in amended independent Claim 27 and Claim 29 has been amended to preserve the correct claim dependencies. The amendments do not introduce any new matter. Attached hereto, captioned "MARKED-UP APPENDIX," is a marked-up version of the changes made to the claims by the current amendment. Applicants respectfully request a prompt consideration of the Application. Please charge the fee of \$830.00 to IBM Corporation Deposit Account No. 09-0447. No additional fee is believed to be required; however, in the event that any additional fees are required, please charge IBM Corporation Deposit Account No. 09-0447.

Respectfully submitted,



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## **MARKED-UP APPENDIX**

### **In the Claims:**

Please delete Claims 1-26 and 28, amend Claims 27 and 29 and add Claims 41-52 as follows:

1. (Deleted)

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26. (Deleted)

1           27. (Amended) A computer program product for permitting an oscilloscope to  
2 independently analyze a signal input into said oscilloscope, said oscilloscope including a plurality  
3 of triggering modes, said computer program product comprising:

4           storage means;

5           instruction means embodied within said storage means for specifying a plurality of trigger  
6 parameters for each of said plurality of triggering modes; and

7           instruction means embodied within said storage means for thereafter, said oscilloscope  
8 automatically analyzing said input signal independently from any user input sequentially utilizing  
9 each of said plurality of triggering modes and said plurality of trigger parameters specified for each  
10 of said plurality of triggering modes[.], including:

11           instruction means embodied within said storage means for determining if said  
12 oscilloscope triggered on one of said plurality of undesired waveforms; and

13           instruction means embodied within said storage means responsive to a determination  
14 that said oscilloscope triggered on one of said plurality of undesired waveforms, for storing  
15 said one of said plurality of undesired waveforms.

28. (Deleted)

1           29. (Amended) The computer program product according to claim 2[8]7, further comprising  
2 instruction means embodied within said storage means for storing a plurality of trigger parameters  
3 associated with one of said plurality of triggering modes utilized when said oscilloscope triggered  
4 on said one of said plurality of undesired waveforms.

1           41. (Newly Added) An oscilloscope, comprising:  
2 a central processing unit;  
3 a memory coupled to said central processing unit;  
4 a plurality of triggering modes;  
5 means specifying a plurality of trigger parameters for each of said plurality of triggering  
6 modes; and

7           means for automatically analyzing an input signal independently from any user input  
8           sequentially utilizing each of said plurality of triggering modes and said plurality of trigger  
9           parameters specified for each of said plurality of triggering modes, including:

10           means for determining if said oscilloscope triggered on one of said plurality of  
11           undesired waveforms; and

12           responsive to a determination that said oscilloscope triggered on one of said plurality  
13           of undesired waveforms, means for storing said one of said plurality of undesired waveforms.

1           42. (Newly Added) The oscilloscope according to claim 41, further comprising means for  
2           storing a plurality of trigger parameters associated with one of said plurality of triggering modes  
3           utilized when said oscilloscope triggered on said one of said plurality of undesired waveforms.

1           43. (Newly Added) The oscilloscope according to claim 41, wherein said means for  
2           automatically analyzing further comprises:

3           means for analyzing said input signal utilizing a first of said plurality of triggering modes and  
4           a first plurality of trigger parameters associated with said first of said plurality of triggering modes;  
5           and

6           means for automatically continuing said analyzing said input signal independently from any  
7           user input utilizing a second of said plurality of triggering modes and a second plurality of trigger  
8           parameters associated with said second of said plurality of triggering modes.

1           44. (Newly Added) The oscilloscope according to claim 43, further comprising:

2           means for establishing said first plurality of parameters including a start voltage level, a stop  
3           voltage level, a voltage step, and a sweep rate; and

4           means for said oscilloscope attempting to trigger on any of said plurality of undesired  
5           waveforms utilizing a current voltage equal to said start voltage level and utilizing said sweep rate.

1           45. (Newly Added) The oscilloscope according to claim 42, further comprising:

2           means for determining, while said oscilloscope is attempting to trigger, an elapsed time;  
3           means for determining if said elapsed time is greater than said sweep rate;

4           means responsive to said elapsed time being greater than said sweep rate, for incrementing  
5           said current voltage by said voltage step; and

6           means for said oscilloscope attempting to trigger on any of said plurality of undesired  
7           waveforms utilizing said current voltage and said sweep rate.

1           46. (Newly Added) The oscilloscope according to claim 45, further comprising means  
2           responsive to said current voltage being equal to said stop voltage, for automatically continuing said  
3           analyzing said input signal utilizing said second of said plurality of triggering modes and said second  
4           plurality of trigger parameters associated with said second of said plurality of triggering modes.

1           47. (Newly Added) The oscilloscope according to claim 46, further comprising:  
2           means for prioritizing said plurality of trigger modes; and  
3           means for establishing a highest priority of said plurality of trigger modes as said first of said  
4           plurality of said triggering modes.

1           48. (Newly Added) The oscilloscope according to claim 47, further comprising means for  
2           establishing a next highest priority of said plurality of trigger modes as said second of said plurality  
3           of said triggering modes.

1           49. (Newly Added) The oscilloscope according to claim 41, wherein said plurality of  
2           triggering modes includes an edge triggering mode.

1           50. (Newly Added) The oscilloscope according to claim 41, wherein said plurality of  
2           triggering modes includes a slew triggering mode.

1           51. (Newly Added) The oscilloscope according to claim 41, wherein said plurality of  
2           triggering modes includes a runt triggering mode.

1           52. (Newly Added) The oscilloscope according to claim 41, wherein said plurality of  
2           triggering modes includes a glitch triggering mode.